ADDITIONAL RECORDS OF THE GONDWANAN SPIDER *AUSTRARCHAEA* FROM SOUTHWESTERN AUSTRALIA

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Spiders of the family Archaeidae are small (less than 5.0 mm long) and generally inhabit low shrubs, forest litter or moss on tree trunks. They have a very distinctive appearance and have been described as "among the most bizarre of spiders structurally" by Forster and Platnick (1984). The anterior part of the cephalothorax is high with a "neck" from which the elongated chelicerae hang down. In spite of their small size they can be readily identified by naturalists in the field, using a hand lens and aided by reference to an illustration in *Australian Spiders* by V.T. Davies (1986) or the sketch here in Figure 1. The stylet-like fangs are apparently used to skewer prey which is comprised of other spiders (Legendre 1961).

The spiders are of biogeographic interest in that although fossils are known from the Baltic amber in Europe, the present distribution is typically Gondwanan with spiders occurring in South Africa, Madagascar and Australia. Related families occur in Chile, Tasmania and New Zealand (Forster and Platnick 1984; Legendre 1977). Representatives of the Australian genus *Austrarchaea* Forster and Platnick, (of which some species were originally attributed to *Archaea* Koch and Berendt) have been known from eastern Australia for many years (Forster 1955, 1956; Forster and Platnick 1984) where they occur in wet litter or in the moss on tree trunks in mesophytic forest and rainforest.

The family was recorded from the south coast of Western Australia by Main (1987a, 1987b) who postulated that its occurrence here is relictual from an early Tertiary, wider distribution. It was not until 1991 that the Western Australian species, *Austrachaea mainae* Platnick was described (Platnick 1991). The only specimens available to Platnick were a juvenile and an adult female and male, all from Torndirrup National Park near Albany. The general habitat from which these specimens were collected, is a mixed heathland including low, dense peppermint (*Agonis flexuosa* (Spreng.) Schau). The dense shrubs, although very low, have a closed canopy and are effectively a "dwarf forest". The Torndirrup peninsula is subject to summer fogs, mists and light rain which helps provide an equable (maritime) microclimate. The spiders were collected in pitfall traps in two relatively undisturbed litter sites which had not been burnt for four and

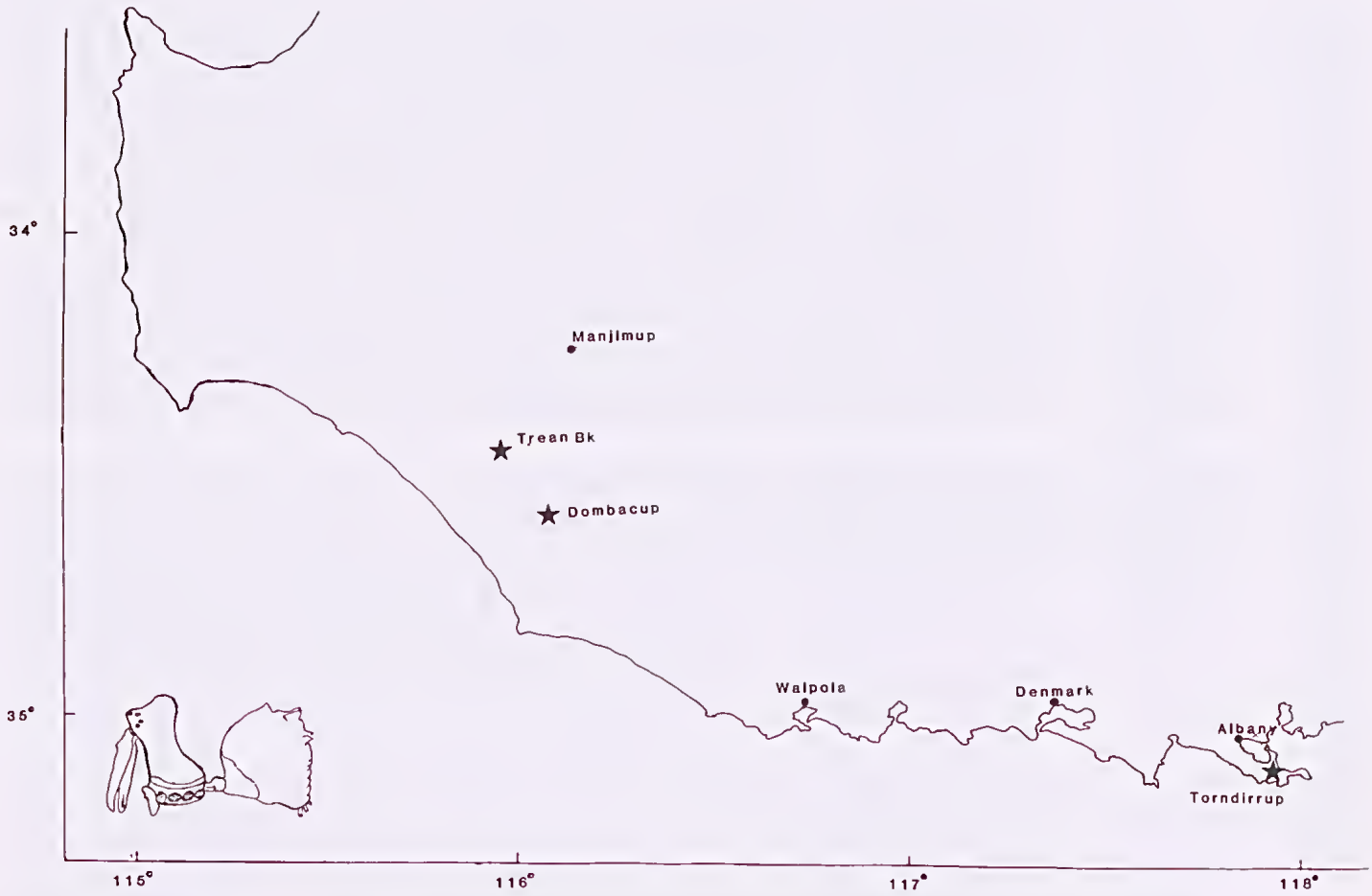

Figure 1. Distribution of *Austrarchaea* in southwestern Australia. Inset: profile of spider (adapted from Platnick, 1991).

seventeen years. These features combine to provide a microhabitat which simulates a mesophytic forest. Main (1987b) indicated that the species is vulnerable to fire.

Six additional specimens from Western Australia have recently come to light in the Australian Museum (AM). These are juveniles and it therefore cannot be confirmed whether they are the same species as that from Torndirrup. Nevertheless these specimens are of interest because they come from two additional localities a considerable distance west of the Torndirrup site (Fig. 1). It is hoped that further specimens, including adults will be collected from the Southern Forest Region and that the identity of the western populations will be resolved.

Austrarchaea mainae and certain other invertebrates are recognised by the Department of Conservation and Land Management as having a particular conservation status. Thus in order to devise management methods and safeguard habitats it is of interest should further specimens from additional localities be discovered.

Details of the previously unrecorded specimens (all collected by M.R. Gray and housed in the Australian Museum; Sydney (AMS)) are as follows. 2 juveniles, Treen Brook, 8 km W Pemberton (34°26'S, 116°04'E), 13 February 1949, (AMS, KS15341); 4 juveniles, Dombakup, Marri Road (34°30'S, 116°00'E), 15 January 1979 (AMS, KS 15242).

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